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Erebiidae and Lycaenidae from Southern Austria.

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The following notes of a visit to Styria and Carinthia in the month of July, 1931, may be of interest. The country visited consists everywhere of low hills with pine and fir woods up to five or six thousand feet, above which stretches open wettish moorland, good for Erebias; the only exception is in certain regions, usually of a dolomitic nature, where the moor is replaced by nearly bare rock with hardly any vegetation or water and consequently no Erebias. Such regions were the Dolomitic hills south of Lienz and the Weissenstein Kogel east of Obdach, forming the northern end of the Kor Alpe.

We visited the following places:—

1. Eisenkappel in the Karawanken Mts. about 15 miles S.E. of Klagenfurt at the junction of the Vellach and Ebriach streams at about 2000 ft. At the top, i.e. south, end of the Vellach valley is the Seebergpasse, 3900 ft., over into Jugo-Slavia, which pass we also visited. Also on the N.W. is the Hoch Obir Mt. of which we visited the slopes up to 3800 ft. In Eisenkappel is a good inn, the "Niederdorfer Gasthaus." Dates July 7th-10th.

2. Obdach in Styria, 3000 ft. up, at the top of the pass north of Wolfsburg in the Lavanttal, over to Judenburg on the Mur. On the west is the Zirbitzkogel, 8000 ft., with hut on top. Dates July 11th-14th. At Obdach is an excellent input the "Gasthaus Grogger."

3. Lienz in Ost Tirol, 2900 ft., at the confluence of the Drau and Isel rivers. From there we visited all the hills around up to about 6000 ft. We also worked down the valley one day at about 2200 ft. In Lienz are many hotels. Dates July 19th-25th.

4. Heiligenblut in the Mölltal on the southern slopes of the Gross Glockner. Height 4200 ft. Here the snowline was at about 8000 ft.

Dates July 27th-30th. Many hotels are to be found here.

The following species were taken: -

Erebia tyndarus, Esp.—At Lienz and Heiligenblut in most localities at 5-5500 ft. Always very local and in small patches. At Lienz in two spots were found trans. ad dromus.

E. manto, Esp.—In one small spot below the Gross Glockner at Heiligenblut at 5975 ft. was a small colony of trans. ad pyrrhula, all rather worn with a few females.

E. eriphile ssp. tristis, H-S.—One on the Zirbitzkogel at 5800 ft. on the Kleines Winterleitersee along with E. epiphron and E. arete. It seems exactly like those I have taken at Prebichl further north (see Higgins, Ent., Jan. 1929, p. 6).

E. pharte ssp. fasciata, Spul.—One from Heiligenblut in the same

spot as E. manto. It is just like those from Prebichl, ride supra.

E. melampus, Fuess.—Common around Lienz and Heiligenblut on the wet moors at 4800-6500 ft. The lowest taken were in a clearing at 4350 ft.

E. arete, Fb.—Eight quite worn specimens were taken on July 13th around the Kleines Winterleitersee below the summit of the Zirbitz-kogel at 5800 ft. This range is really the northern extension of the Sau Alpe which is a well known locality for this rare species.

E. euryale.—Two very different types were taken:—

1. At Obdach and Eisenkappel, the type seems to be isarica, Heyne (formerly clauis, Frhstr., see Warren, Ent. Rec., Nov. 1931). On the upper side of both sexes, the brown bands have usually an irregular inside edge, few black spots (usually three and three), and without white centres; in some cases the black spots are practically absent. On the underside the forewings have the inner margin very indistinct and the brown spreads nearly to the body. In both wings the black spots usually have small white centres. In the 3 3 the hindwings are unicolorous; in the 2 2 they have a broad whitish or yellow submarginal band.

2. Around Lienz and on the Dobratch Mt. near Villach in both sexes there is a tendency on the upper side for the brown band to split up, culminating in var. occillaris, Stdgr., in which it survives merely as rings around the black dots; in a few cases even the rings have gone and also the white fringe. On the underside however in the forewing the band remains fairly wide and of regular breadth. The hindwings are as var. isarica. The occillaris types formed at least half those seen.

E. ligea.—Common in most places up to the forest limit. At Eisenkappel it was newly hatched on July 7th, and in the plain near Lienz equally fresh on the 23rd.

E. gorge, Esp.—Mostly var. erinnys. At Heiligenblut in good condition on the Hochtor at 7000 ft. on July 29th.

E. epiphron, Kn.—On the Zirbitzkogel from just above the tree level at 4750 ft., up to 6500 ft., chiefly var. cassiope. At Heiligenblut on the Hochtor it went up to over 7000 ft. In the same district in the Fleisstal two specimens var. nelamus were taken on July 30th at 7000 ft.

E. lappona, Esp.—On the Zirbitzkogel from just below the summit, 8000 ft., down to about 6500 ft. where E. epiphron began. Some were quite battered, others quite fresh. At Heiligenblut on the Hochtor one var. sthennyo was taken at 7000 ft.

E. ceto, Hb.—One specimen from above St. Johann im Walde near Lienz, at 6000 ft.

Heodes virgaureae.—Common at all places visited between 2000-5000 ft. Only males observed.

H. hippothoë.—Both sexes common, in a worn condition. A fresh male was taken at 6500 ft. at Heiligenblut on July 29th.

Rumicia phlaeas.—Single specimens taken at Obdach and Lienz.

11. dorilis.—A var. montana below the Seebergpasse. Typical form at Obdach.

Syntarucus telicanus.—Single specimens near Eisenkappel (1850 ft.) and near Lienz (2250 ft).

Everes argiades. — One worn female in the woods above Eisenkappel

at about 3375 ft.

Plebeius aegon.—Common at all places visited, between 2000 and

6000 ft.

Polyommatus optilete.—Single fresh females at Obdach and Heili-

genblut.

Scolitantides vicrama (baton).—A few fresh specimens at 2000 ft.

on the plain below Lienz.

Plebeius orbitulus.—Common at about 6850 ft. and upwards near

Heiligenblut, in very fair condition.

P. pheretes.—Same as orbitulus, with lower limit (a single specimen) at 5650 ft.

Aricia medon (astrarche).—Common.

Polyommatus eros.—Males common in good condition on grassy slopes above Heiligenblut, 5500-6500 ft.

P. icarus.—Common at most places and altitudes.

P. dorylas (hylas).—Common. Only males seen at first, the females not appearing before the last week in July.

P. coridon.—Common up to 5000 ft. at all places except Obdach. Cupido lorquinii.—Common at Eisenkappel around 2000-3000 ft.

C. minima.—Common at all places up to 5650 ft.

Lycaena alcon.—Both sexes in fresh condition in high meadow, 3800 ft. above Eisenkappel.

I. arion.—Common at all places up to 5000 ft. Var. obscura only taken at the lower altitudes (2400 ft.) near Eisenkappel and Lienz.

Lycaenopsis argiolus.—In fresh condition at Eisenkappel.

The following may also be of interest:-

On July 29th the Hochtor Pass above Heiligenblut N. over to Rauris was snowbound and there was a north wind coming over the pass. A constant stream of *Pieris brassicae* of both sexes kept drifting over the snow from the north, sometimes as many as ten a minute.

They flew at 20-30 feet up and passed down to the Mölltal where

they settled.

On July 23rd we visited the Drau plain E. of Lienz, about 2200 ft. up. The usual type of *P. napi* was var. *napaeae*, Esp. except in one quite small patch of wood where all were of a type very advanced to var. *bryoniae*, Ochš., in fact a small island of this variety amongst a sea of var. *napaeae*.